Wireless-G Broadband Router

User Manual (GWA502)

IOGEAR®

Welcome

Thank you for choosing IOGEAR® to serve your wireless needs. Soon, you will be sharing files or surfing the Internet wirelessly. We hope you will have as much fun using your IOGEAR® Wireless-G Broadband Router, as we had designing it.

Rest assured, your IOGEAR® Wireless-G Broadband Router is built rock-solid to ensure maximum up-time for you to stay up-and-running. If for any reason you have a problem, we stand behind our products with an industry-leading 3 year factory warranty, so you can have peace-of-mind with your current and future IOGEAR® purchases.

We want you to be happy with your purchase, so we have made every effort to ensure product quality, reliability, and ease-of-use.

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Package Contents

This package contains:

- IOGEAR Wireless-G Broadband Router
- Category-5 Ethernet Patch Cable
- AC Power Adapter
- Quick Start Guide
- User Manual CD
- Warranty & Registration Card

Introduction

IOGEAR's Ultra-Fast Wireless-G Broadband Router is an all-in-one wireless access point, router, and 4-port Ethernet switch for both small and home office users. With IOGEAR, you can surf the Internet, share files, and chat with your friends....Wirelessly!

Our simple, easy-to-use, web-based setup wizard will have you up-and-running in minutes.
Moreover, our turn-key Firewall and Wireless Security packages keep you safe on the Internet.

Remember, IOGEAR's Wireless Broadband Router gives you the same connectivity and security that big companies use...all in a small, cost-effective, reliable setup. Go with IOGEAR, and go Wireless!

Features

• Built-in…
  - 4-port 10/100 Base T Ethernet Switch
  - Internet Router
  - Wireless Access Point

• 802.11g and 802.11b Compliant

• Advanced Wireless Security Package
  - Wireless Protected Access (WAP)
  - Wired Equivalent Privacy (WEP)
  - MAC and IP Address Filtering

• Built-in High-Gain Directional Antenna —— Super signal transceiving

• NAT and SPI FireWall

• Solid Three Year Limited Warranty

System Requirements

• PC system
- 200MHz or faster CPU
- Internet browser
- Microsoft Windows 98/ME/2000/XP
- Ethernet interface card or WLAN client card installed

• Mac system
- G3 Power Mac or higher
- Mac OS 9.2 and above
- Open Ethernet Prot or Airport card installed

Pictorial Introduction

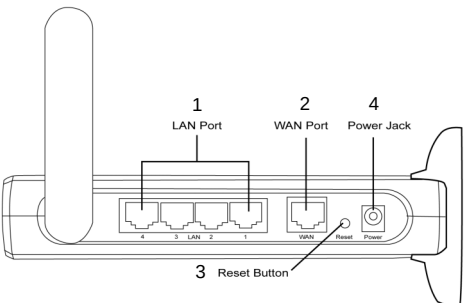
Back View

1. **LAN ports**: Ethernet Ports. Allows connections of up to four computers or daisy-chain out to more hubs and switches.

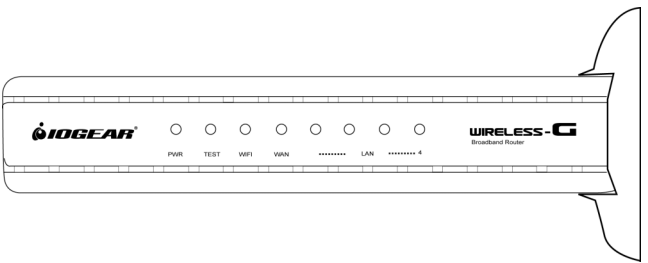
2. **WAN port:** The WAN port is where you connect your Cable or DSL modem through an ethernet cable. It's the only port that connects to the Internet.

3. **Reset button:** The reset button can reboot the router or set back to factory default setting. Pess about 2 seconds to reboot the router; press over 5 seconds to go back to factory setting.

4. **Power Jack:** Power cable connection for 12V adapter.



Front View



Pictorial Introduction

Front View

LED Indication

	On	Blink	Off
PWR	➢ Unit is plugged in and working normally ➢ Steady red.	➢ N/A	➢ Unit is not plugged in and it is OFF.
Test	➢ N/A	➢ The unit is resetting. ➢ Flashes amber	➢ The unit is OFF. ➢ Successful completion of testing.
WLAN	➢ Detecting a valid WLAN link. ➢ Steady amber.	➢ Detecting Wireless LAN network activities.	➢ No Wireless LAN network available in the vicinity.
WAN	➢ Detecting a valid WAN link. ➢ Steady amber	➢ Detecting Internet activities.	➢ Ethernet cable is not plugged in, or no Internet connection available.
LAN 1-4	➢ Ethernet Cable is plugged in and there is a valid network connection. ➢ Steady green.	➢ Detecting LAN activities.	➢ Ethernet cable is not plugged in or the unit is OFF.

Configuring your PC

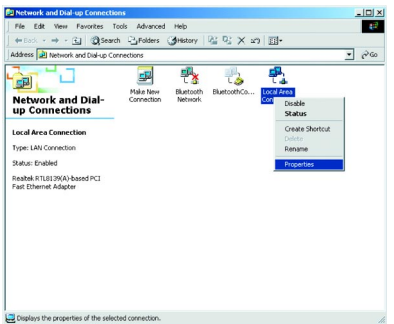
The instructions in this section will help you configure each of your computers to be able to communicate with the Wireless-G Broadband Router.

Note: *The following screenshots are taken in Windows 2000. For other OS, the configuration procedure will be exactly the same but the screenshots will vary.*

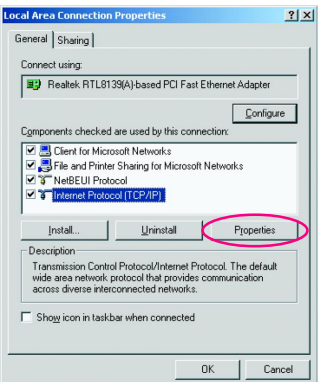
1. Right-click mouse button on the **My Network Place** icon on your Windows desktop and select **Properties** from the short-cut menu.

Installation

2. Right-click the **Local Area Connection** for the Ethernet Adapter equipped on your computer and select **Properties** from the shortcut menu.



3. Click the **General** tab of the Location Area Connection dialog box, select Internet Protocol (TCP/IP) and click **Properties**.

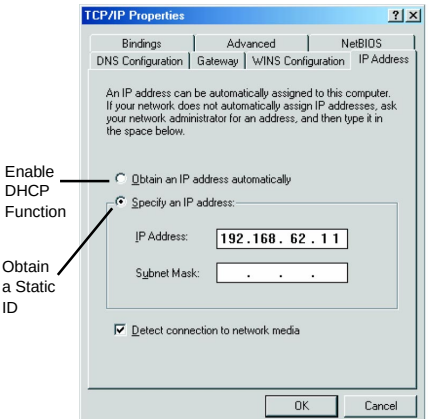


4. In the **General tab**, you can choose either obtain an IP address automatically or Use the following IP address.

   - **Enable DHCP**: Click the button of **Obtain an IP address automatically**.

   - **Use static IP address**: Click the button of Use the following IP address. For example, in the IP address field, enter in the following IP address: 192.168.62.11.

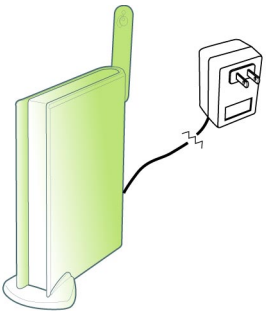
Note: The default IP address of the router is 192.168.62.10 so the IP address for the Ethernet Adapter must follow the 192.168.62.x IP address format and the IP should not be the same IP address assigned to any other devices in the network.



5. Under Subnet mask, input the following IP address: 255.255.255.0.

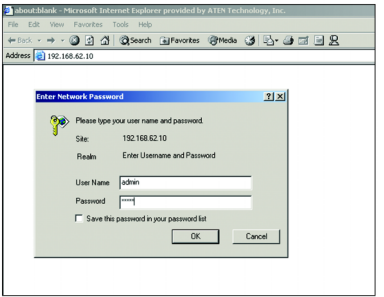
6. Click **OK** to save your settings and close the dialog box.

1. Take your IOGEAR® Wireless-G Broadband Router out of box. Simply plug-in the included AC Adapter to the wall outlet, then to the Broadband Router. Make sure the power LED illuminates; otherwise, try another AC Wall Outlet.



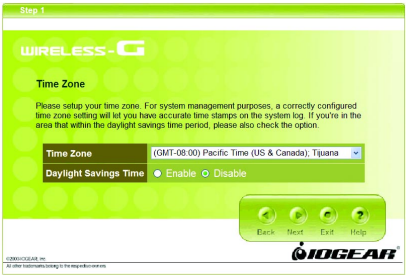
2. For initial setup, plug your desktop or notebook computer directly into the LAN Port #1 with the included CAT5 patch cable. Please make sure that your computer LAN setting is DHCP or 192.168.62.x. Submask: 255.255.255.0.

3. Open your Internet Browser (Internet Explorer, Netscape, or Safari), and type in the following URL in your browser's address bar: **192.168.62.10.** You will be brought to Enter Network Password prompt window. The default User Name is **admin**; Password is **admin**.

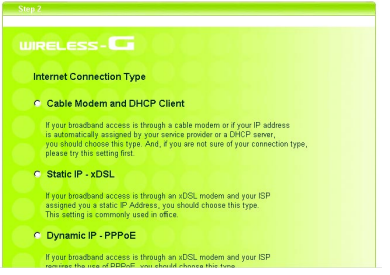


4. To proceed to the basic setup options, click on the **Typical** button.

5. You will now be asked for the Time Zone you are in. Select your Time Zone, and select whether you wish to enable Daylight Savings Time. Click **Next** to continue.



6. You will now be asked for which Internet Connection Type you are using. When you select the connection type, you will be asked for your ISP's configuration settings (if applicable).



a. **Cable Modem and DHCP Client** - If your broadband access is through a cable modem, or if your IP address is automatically assigned by your service provider or a DHCP server, you should choose this type.
   • If your ISP gave you a Host Name or a MAC address, you can enter them on the following page.

b. **Static IP** - xDSL - If your broadband access is through an xDSL modem and your ISP assigned you a static IP Address, you should choose this type.
   • Please enter the necessary information such as the IP Address, Subnet Mask, Default Gateway and DNS server that your ISP provided in the following page.

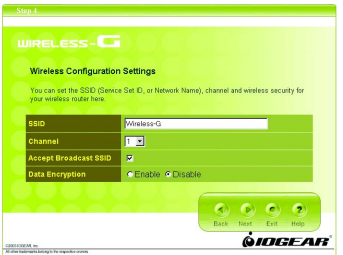
c. **Dynamic IP** - If your broadband access is through an xDSL modem and your ISP did not assign you a static IP Address, you should choose this type.
   • Please enter the necessary information such as username and password your ISP provided in the following page. If your ISP gave you a service name, you should enter it in the following page.

d . **Dynamic IP (European countries)** - If your broadband access is through an xDSL modem and your ISP did not assign you a static IP Address, you should choose this type.
   • If your Internet Service Provider requires the use of PPTP, enter the information. (PPTP is generally more popular in Europe.)

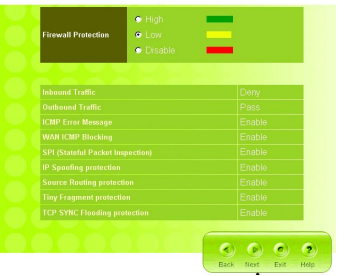
After you have entered your ISP's configuration settings, click **Next**.

7. You will now see the Wireless Configuration Settings. You can set the SSID, channel, and wireless security for your wireless gateway here. Click **Next** when you are done.

   (For more information on SSID, channel, and wireless security, you can move the mouse cursor over the highlighted feature and an explanation will appear.)



8. You will now see the Firewall settings. IOGEAR® offers you an easy set-up package to configure a Firewall. Please note high Firewall protection will make your network securer, but may cause wireless gateway's performance to be lower. Click **Next** when you are done.

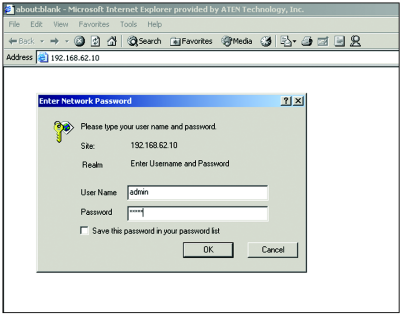


9. This is the summary page showing all configurations you've set. Click **Next** when you are done.

10. You can click the test button to see whether your Internet connection is functioning. Please make sure your WAN port has been connected (to a xDSL, Cable modem, or Ethernet). Click **Finish** when you are done. When you have finished the configuration, you will be brought to the main window.

Advanced Setup

After going through all the steps in Typical Configuration, your wireless router is ready to connect to your ISP and allow internal clients to access to the Internet. If you want to customize your wireless router for specific purposes, you may perform the configuration in this section.



1. Log-in to your Wireless Broadband Router (Default as http://**192.168.62.10**)

2. You will now be asked for User Name and Password. Unless you have changed them, they should be default as **admin** (user name); **admin** (Password).

3. After you have logged in, click on the **Custom** button.

4. The Customized Configuration menu is separated into seven categories.

System It includes all the basic configuration tools, such as options to control management access, upgrading system firmware and restart system.

LAN The router must have an IP address for the local network. You can also enable DHCP service for dynamic IP address allocation to your clients, or configure filtering functions based on specific clients or protocols.

Wireless In this section, you can configure all wireless related settings for your wireless access point.

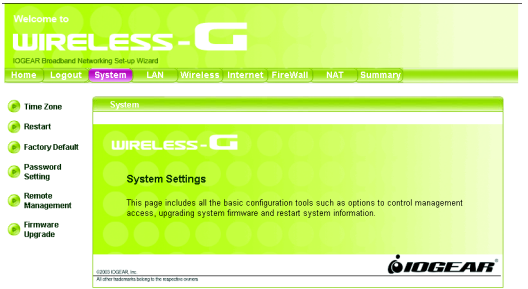
Internet In Internet settings, you can configure the way your router connects to you ISP.

Firewall Your Wireless-G Broadband Router features powerful and flexible Firewall protection to keep your network secure. You can configure the strength of Firewall protection to a high or low level. If you are an advanced user, you can configure Firewall policies to meet on your needs.

NAT Network Address Translation allows multiple users at your local site to access the internet over a single user account. It can also prevent hacker attacks by mapping local addresses to public addresses for key services such as Web or FTP.

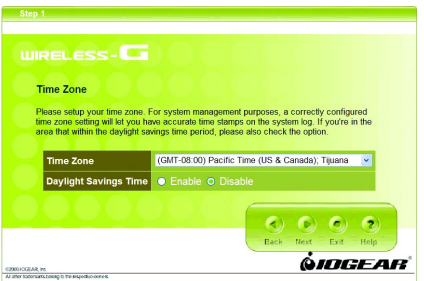
Summary In this section, you can check all system status, network statistics and Event Log.

System Page


Welcome to
WIRELESS-G
IOGEAR Broadband Networking Set-up Wizard
Home
Logout
System
LAN
Wireless
Internet
FireWall
NAT
Summary
Time Zone
Restart
Factory Default
Password Setting
Remote Management
Firmware Upgrade
System
WIRELESS-G
System Settings
This page includes all the basic configuration tools such as options to control management access, upgrading system firmware and restart system information.
IOGEAR

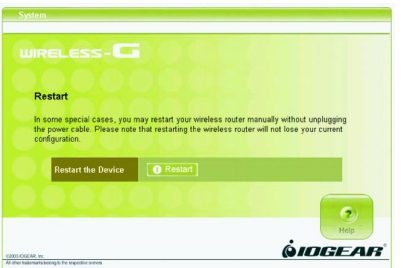
Time Zone

For system management purposes, a correctly configured time zone setting will let you have accurate time stamps on the system log. If you're in an area that is within the daylight savings time period, please also check the option.



Restart

In some special cases, you may restart your Wireless-G Broadband Router manually without unplugging the power cable. Please note that restarting the Wireless-G Broadband Router you will not lose your current configuration. Click **Restart** button to restart the router.

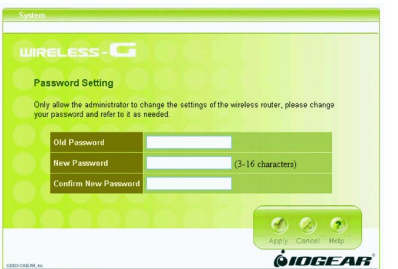


Factory Default

Click the **Restore** button to set your configuration back to factory settings.

Password Setting

This is where you can change your administration password for the Wireless-G Broadband Router. For better security, you should give a new password because password setting is disabled by default. Don't forget to Click **Apply** button to make your configuration take effect.



Remote Management

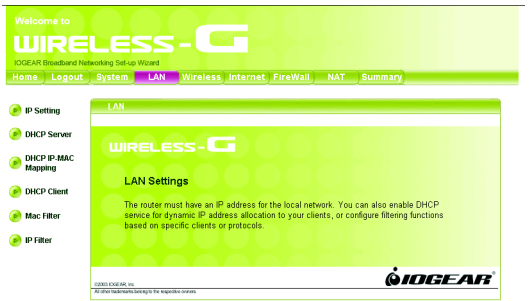
This setting allows you to manage your Wireless-G Broadband Router through a WAN connection (Internet). Click the button to enable or disable this function. If you enable this function you can use the specified port on your PC to remotely control the router. The default port is 8080.

Firmware Update

From time to time, a new and updated firmware will be released, which has either feature improvements or bug fixes. Once you download the new firmware patch, you can update the firmware of your Wireless-G Broadband Router from here.

- **Upgrade Steps:**
  To update the firmware by web page, click the **Browse** button first to select the file that had been saved in your laptop or PC. Then click the **Upgrade** button to update the firmware. Please do not power off the router while upgrading and there will be a sequence of screen descriptions to inform you the status of the upgrade process. If the upgrade process is successful, the utility will go back to homepage.

LAN Page


Welcome to
WIRELESS-G
IOGEAR Broadband Networking Set-up Wizard
Home
Logout
System
LAN
Wireless
Internet
FireWall
NAT
Summary
IP Setting
DHCP Server
DHCP IP-MAC Mapping
DHCP Client
Mac Filter
IP Filter
LAN
WIRELESS-G
LAN Settings
The router must have an IP address for the local network. You can also enable DHCP service for dynamic IP address allocation to your clients, or configure filtering functions based on specific clients or protocols.
IOGEAR

IP Setting

You can setup IP address information for the LAN ports of your wireless router.

DHCP Server

Your wireless router can act as a DHCP server, and assign IP addresses to your clients automatically. This function is enabled by default. The assigned IP addressed will be within the range of IP pool that you specify. It is a good security practice to set just enough range of IP pool for the devices you want to connect to this wireless network. This can block other unintended devices to enter your network.

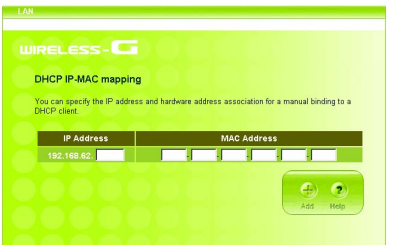
- **IP Pool Starting Address**: Enter a value for the DHCP server to start with when issuing IP addresses. The default value is 192.168.62.12.

- **IP Pool Ending Address**: The maximum number of PCs that you want the DHCP server to assign IP addresses to. This number cannot be greater than 253.

- **Lease Time**: Setting Lease Time for shorter period, such as one day or several hours, can free up IP addresses frequently. However, you may experience brief network performance drag down or stall when DHCP reassigning IP addresses to clients. It also causes a computer's IP address changed over time. If you will use some advanced router features, such as DMZ or client IP filters, you may select longer time to avoid frequent re-set, or you can use Static Host setting described below.

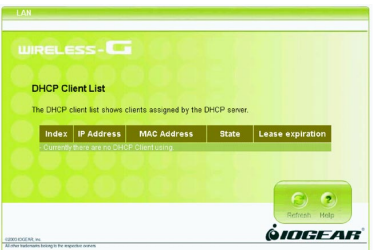
DHCP IP MAC Mapping

This setting will permanently associate the MAC address of a LAN client to an IP address. The client is assigned the same IP address every time. Changes to a currently assigned LAN client IP will take effect only after expiration of current lease. To create a new association, enter the information on the field and click **Add** button. To delete an association, press **Delete** button on the list.



DHCP Client

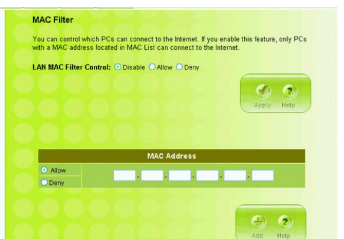
The DHCP client list shows clients assigned by the DHCP server. Click **Refresh** button to refresh the list.



MAC Filter

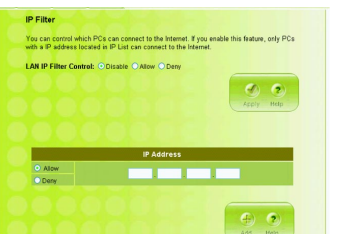
You can control which PCs can connect to the Internet. If you enable this feature, only computers with a MAC address located in MAC List can connect to the Internet.

To add a MAC address, enter the MAC address in the MAC address field, specify **Allow** or **Deny** and click **Add** button. Click **Delete** button will delete a MAC Address.



IP Filter

You can control which PCs can connect to the Internet. If you enable this feature, only computers with an IP address located in IP List can connect to the Internet. To add an IP address, click the radio button of **Allow**, type the IP address and click **Add**. The allowed IP address will be added. To delete an IP address, click **Delete** button on the list.



Wireless Page

SSID & Channel

Here is where you may modify the SSID and Channel of your Wireless-G Broadband Router.

- **SSID (Service Set ID, or Network Name):**
  Enter the name you wish to give your Wireless-G Broadband Router (ex. "JOHN" or "IOGEAR"). Every Wireless Clients (PC card, USB and PCI adaptors) in your network must be configured to accept with the same SSID.

- **Channel**
  It can be left as Default, unless you plan on using multiple access points. When multiple Wireless Networks presenting, please ensure they are not using the same channel, preferably at least 5 channels apart to each other.

- **Accept Broadcast SSID**
  By broadcasting SSID, all wireless devices at surrounding area can see your wireless router and easy to associate with it. However, it is a good security practice not to broadcast SSID, just configure SSID info to those client devices you want them to access you network.

Authentication & Encryption

It allows you to configure the setting of network authentication and data encryption.

- **Network Authentication:**
  You can specify the authentication type.
  - "Both" allows wireless client devices access your router no matter with shared key or not.
  - "Share Key" only allows devices with same WEP (Wired Equivalent Privacy) key to access your wireless router.
  - "802.1X" and "WPA" require you to type in Radius server IP and server key. Please check with your Network Administrator for related information.
  - "WPA-PSK" needs a pre-shared key to be set on your wireless router and all wireless client devices.

• **Encryption:**
- WEP Configuration

Click the drop-down menu to select WEP to enable the WEP function and select 64 bits or 128 bits. The 128 bits gives a higher level of security. The selection must be the same between all connected network devices. For 64-bit WEP key, it should be five ASCII characters (a-z and 0-9, for example: gear56) or ten hexadecimal digits in length (a through f, and 0 through 9, for example: 2af30bc9d5); for 128 bit WEP key, the length will be 13 characters for ASCII or 26 digits for Hexadecimal. WEP keys 1-4 enable you to create an encryption scheme for wireless LAN transmissions.

WPA and WPA-PSK configuration

Wi-Fi Protected Access (WPA) is a sub-set of the forthcoming IEEE 802.11i security standard. WPA addresses those known weakness of WEP and provides stronger security to wireless network.

IOGEAR Wireless-G Broadband Router supports three authentication modes:

- 802.11x (need RADIUS server to authenticate the clients, using WEP keying)
- WPA (same 802.1x, but with TKIP keying support); WPA-PSK (Pre-Shared Key, no RADIUS server needed)

- WPA-PSK

There are two ways to configure WPA Pre-Shared Key: - WPA

1. **PassPhrase Mode**: Input a phrase into the field. The Wireless-G Broadband Router will automatically generate a Pre-Shared Key based on the phrase you enter. The phrase can be within 8 to 63 characters (we recommend at least 12 characters to achieve a sufficient level of security).

2. **Hex mode**: Input 64 hexadecimal digits. Please write down the key you enter. You will need to enter same key to your wireless client side.

WPA Group Rekey Interval
This router could change the group key periodically. Enter the period you want into the WPA Group Rekey Interval field.

Encryption Type
The current version only supports TKIP encryption. AES encryption will be available soon.

RADIUS Server IP
Please enter the IP address of RADIUS server

RADIUS Server Port
This field specifies the port on which RADIUS server is listening.

RADIUS Server Key
This field carries the shared secret for RADIUS authentication. Some information need to be encrypted in a RADIUS packet, this key is used to encrypt and decrypt this information (such as password).

Reconfirm RADIUS Server Key
Make sure RADIUS Server Key is correct.

WPA Group Rekey Interval
It is the same as WPA-PSK configuration

Encryption Type
It is the same WPA-PSK configuration

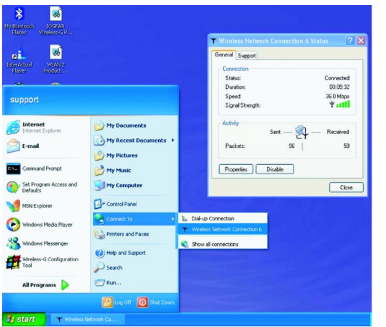
Note:
To complete the WPA operation, you also need to enable the WPA client at the wireless client site (the computer running wireless client's devices, such as the GWP511 Cardbus card GWP512 Cardbus Card or GWU513 USB adaptor).

Microsoft provides a free WPA upgrade for Windows XP Service Pack 1 (SP1) and later or Windows Server 2003. For any OS other than Win XP, there is client software available from third-party suppliers such as Funk Software's Odyssey (www.funk.com). IOGEAR's GWP512 Wireless-G Network PC Card has it built-in.

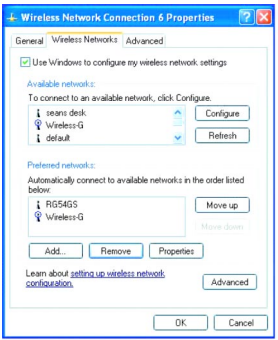
The WPA client for Windows XP can be found in the Microsoft Knowledge Base Article 815485 (http://support.microsoft.com/default.aspx?scid=kb;en-us;815485) or downloaded directly from Microsoft http://www.microsoft.com/downloads/details.aspx?FamilyID=009d8425-ce2b-47a4-abec-274845dc9e91&displaylang=en

After installed, the Windows WPA Client will update the wireless network configuration dialog boxes to support new WPA options.

1. Click **Connect To>Wireless Network Connection** to bring up the dialogue window of **Wireless Network Connection Status**. Click the **Properties** box to bring up next dialogue window.



2. In the **Wireless Network Connection Properties** window, under **Wireless Networks** tab, please check the box of "**Use Windows to configure my wireless network settings**" to turn on the Wireless Zero Configuration service. Select the wireless access point you want to associate to, then click **Configure** box at the right side to bring up next dialogue window.



3. Set up your WPA configuration by selecting the **Network Authentication** mode and **Data encryption**, and input same **Network key** as you input at the Wireless-G Broadband Gateway. Then, you are served by a more secured wireless network

Radio Setting

Here you can configure Wireless radio settings. Please note that these settings are for advanced users or network administrators. If you are unfamiliar with how to configure these parameters, we recommend that you keep them at their default value.

- **Mode:** The Wireless-G Broadband Router can be set at three wireless modes: Auto, 802.11g only and 802.11b only. If both 802.11g and 802.11b clients presenting at your network, please select "Auto" mode (This is default mode). "802.11g only" mode only supports 802.11g clients, and gives better performance to whole network. However, all 802.11b clients will not be able to use your network at this mode setting. In some situation, 802.11b clients with old drivers cannot work with Auto mode; "802.11b only" mode can accommodate this problem, but decrease the performance of 802.11g devices.

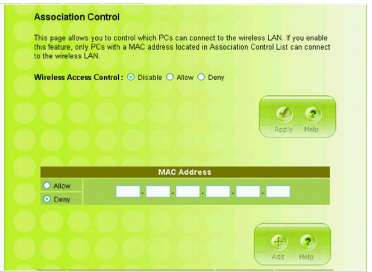
- **Beacon Period**: Beacons are packets sent by the router to synchronize a wireless network. The value of beacon interval is depending on the environment where the router is operating. Specify a Beacon interval value between 1 and 1000(units: ms). The default value is set to 100 milliseconds, i.e., ten beacons per second.

- **RTS Threshold**: The RTS threshold is the packet size at which packet transmission is governed by the RTS/CTS transaction. Each station can have a different RTS threshold. If you encounter inconsistent data flow, only minor modifications are recommended. The default value for RTS Threshold is set to **2347**.

- **Fragment Threshold**: This value should remain at its default setting of **2346**. If you experience a high packet error rate, you may modify slightly your "Fragmentation" value within the value range of 800 to 2346. Setting the Fragmentation value too low may result in poor performance.

- **DTIM Period**: Enter a value between 1 and 255 for the Delivery Traffic Indication Message (DTIM). A DTIM is a countdown informing clients of the next window for listening to broadcast and multicast messages. When the router has buffered broadcast or multicast messages for associated clients, it sends the next DTIM with a DTIM Interval value. Its clients hear the beacons and awaken to receive the broadcast and multicast messages. The default value for DTIM interval is set to **1**.

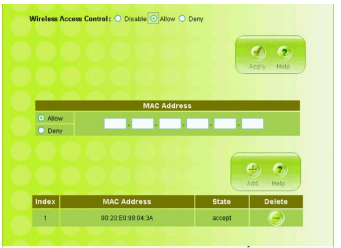
Association Control



This page allows you to control which computers can connect to the Wireless-G Broadband Router.

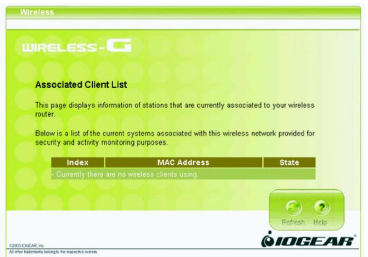
If you enable this feature, only computers with a MAC address listed located in Association Control List can connect to the wireless LAN.

To add an association, enter the MAC address in the address field, specify **Allow** or **Deny** attribute and click **Add** button.
To delete an association, click **Delete** button from the Association Client List.

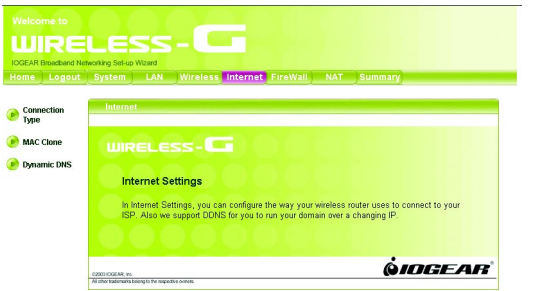


Associated Client List

It displays information of stations that are currently associated to your wireless router. You can check who are linking to your network, for security and activity monitoring purposes. Click **Refresh** button to update the list.



Internet Page

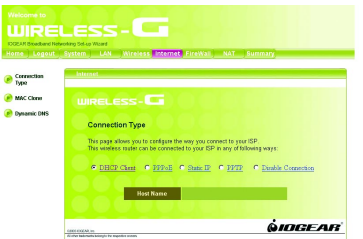


In Internet Settings, you can configure the way your Wireless-G Broadband Router uses to connect to your ISP.

Connection Type

It allows you to configure the way you connect to your ISP. This Wireless Broadband Router can be connected to your ISP in any of the following ways: DHCP Client, PPPoE, Static IP and PPTP

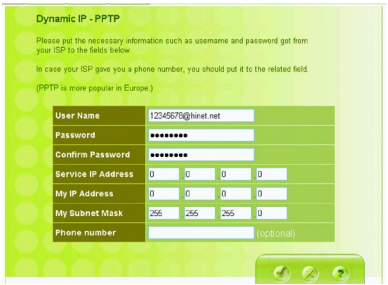
- DHCP Client: Enter the Host Name if your ISP provides it; otherwise, just leave it blank.



- Dynamic IP - PPPoE: Complete User name, password, confirm password fields.

- Static IP: Complete the IP address, subnet mask, ISP gateway and primary DNS fields.

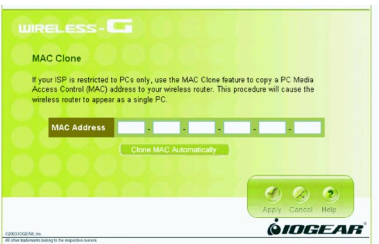
- Dynamic IP - PPTP: Complete fields on this screen. Those information can get from your ISP.



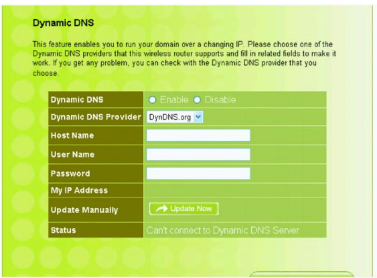
MAC Clone

If your ISP restricts connections to pre-registered computers only, use the MAC Clone feature to copy your computer's Media Access Control (MAC) address to your wireless broadband router. This procedure will cause the Wireless-G Broadband Router to appear as a single computer.

To do MAC Clone: click **Clone MAC Automatically**.



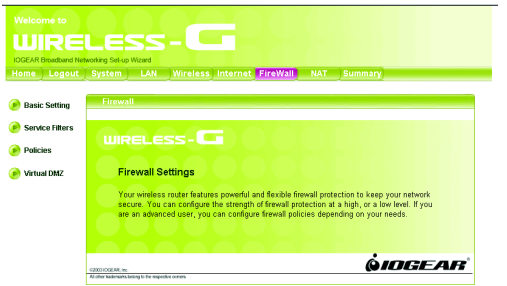
Dynamic DNS



This feature enables you to run your domain (ex. www.mywebsite.com) over a changing IP. Before you can use this feature, you need to sign up for DDNS service from one of the Dynamic DNS providers that this Wireless-G Broadband Router supports and fill in related fields to make it work. You may follow the following steps to enable this function.

- Sign up for DDNS service and write down the host name, user name and password.
- Click the radio button of **Enable** to enable the dynamic DNS function.
- Complete the host name, user name and password fields.
- Click **Update Now** button to update the information. Click the radio button of **Disable** to disable this function.

Firewall Page



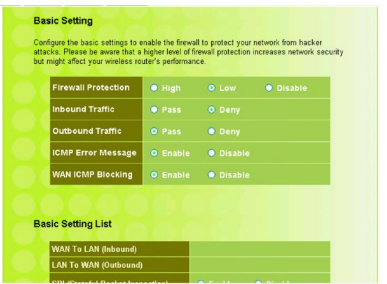
Your IOGEAR Wireless-G Broadband Router features powerful and flexible firewall protection to keep your computer and/or network secure.

You can configure the strength of firewall protection at a high or low level. If you are an advanced user, you can configure firewall policies depending on your needs.

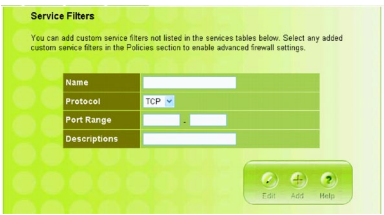
Basic Setting

Configure the basic settings to enable the firewall to protect your network from hacker attacks. Choose High, Low or Disable button will enable its corresponding settings.

Please be careful on these configurations. Any incorrect settings might cause the firewall to block all traffic or make your network vulnerable to outside hacker attacks.



Service Filter



You can add custom service filters not listed in the services tables. Select any added custom service filters in the Policies section to enable advanced firewall settings.

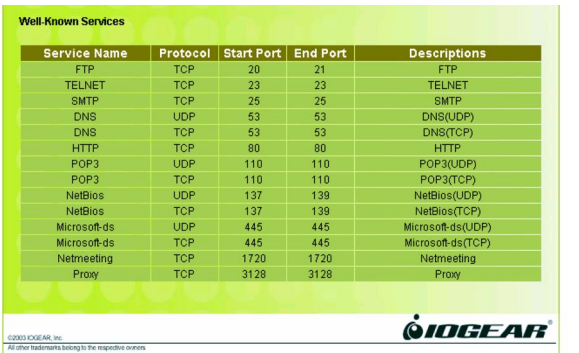
Name field: Enter the name you wish to give to any application.

Protocol: Click the drop-down menu to select TCP or UDP protocol.

Port range: Check the application's documentation and enter the port range.

Descriptions: Describe the application.

Some of the popular applications and protocol/port numbers settings are defined below:



Well-Known Services

Service Name	Protocol	Start Port	End Port	Descriptions
FTP	TCP	20	21	FTP
TELNET	TCP	23	23	TELNET
SMTP	TCP	25	25	SMTP
DNS	UDP	53	53	DNS(UDP)
DNS	TCP	53	53	DNS(TCP)
HTTP	TCP	80	80	HTTP
POP3	UDP	110	110	POP3(UDP)
POP3	TCP	110	110	POP3(TCP)
NetBios	UDP	137	139	NetBios(UDP)
NetBios	TCP	137	139	NetBios(TCP)
Microsoft-ds	UDP	445	445	Microsoft-ds(UDP)
Microsoft-ds	TCP	445	445	Microsoft-ds(TCP)
Netmeeting	TCP	1720	1720	Netmeeting
Proxy	TCP	3128	3128	Proxy

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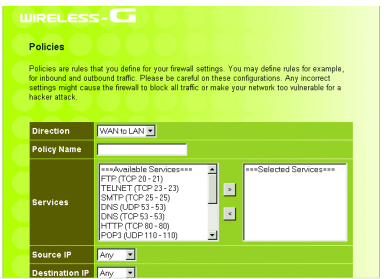
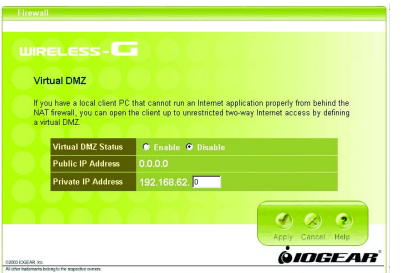
Policies

Policies are rules that you define for your firewall settings. You may define rules, for example, for inbound and outbound traffic.

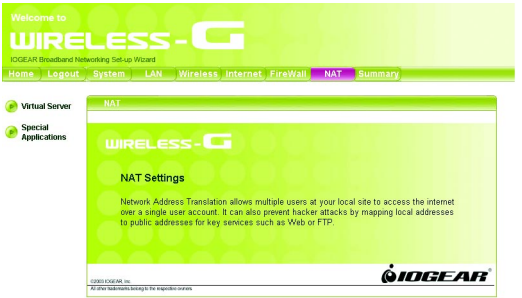


Virtual DMZ

If you have a local client computer that cannot run an Internet application properly from behind the NAT firewall, you can open the client up to unrestricted two-way Internet access by defining a Virtual DMZ.



NAT Page



Network Address Translation allows multiple computers on your network to access the Internet over a single user account. NAT can also prevent hacker attacks by mapping local addresses to public addresses for key services such as Web or FTP.

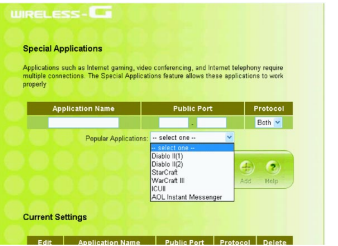
Virtual Server

You can configure the Wireless-G Broadband Router as a virtual server so that remote users can access services such as Web or FTP at your local site via public IP addresses.

For example: a FTP server (public port 21) will be translated into a local site (private 192.168.1.25) through private port 1502.

Virtual Server

Special Applications such as Internet gaming, video conferencing, and Internet telephony software usually require multiple connections. The Special Applications feature allows these applications to work properly.



Summary Page

This page includes all the basic configuration of the Broadband Router.

System Status

You can view the status of your Wireless-G Broadband Router from this window. The system status of the router is divided into four sections: General information, Internet Settings, LAN Settings and Wireless Settings. Click **Refresh** button to update all information.

Statistic

List the data transmission status of the router. Click **Refresh** button to update statistics.

Event Log

You can view any/all system events sent through your network from this window. Click **Refresh** button to update the list.

Standards	IEEE 802.11b, IEEE 802.11g Wireless LAN IEEE 802.3 10BASE-T, IEEE 802.3u 100 BASE-TX, IEEE 802.3x flow control
Ports	LAN: Four 10/100Mbps RJ-45 switch ports WAN: One 10/100Mbps RJ-45 port for DSL/Cable modem
Wireless Frequency band	2.400 - 2.497 GHz
Modulation Technique	DSSS (DBPSK, DQPSK, CCK), OFDM
Data rate	54 Mbps, 48, 36, 24,18,12, 11, 9, 6, 5.5, 2, 1 Mbps (auto-fallback)
Wireless Operating Channels	1-11 US/Canada, 1-13 Europe (ETSI), 10-13 France, 10-11 Spain
Wireless Operating range	Indoor environment: 20-100 meters Outdoor environment: > 200 meters
RF Output Power	21 dBm (Typical)
Receiver Sensitivity	-68dBm@54Mbps (ERP-OFDM); -82dBm@11Mbps (ERP-DSSS/CCK)
Antenna	One Dipole type external antenna and one patch type internal antenna
Antenna gain	Peak Gain = 7dBi

Specification

Platforms Supported	PC or MAC
Protocols Supported	TCP/IP, NAT, UDP, PPPoE, PPTP, DHCP (client and server) ,HTTP, TFTP, CSMA/CD for wire, CSMA/CA for wireless, -NAT/PAT
WAN type Supported	Static IP address, dynamic IP address (DHCP), PPPoE client, and PPTP
Max. Users Supported	253
Management	Embedded Web server for browser management Wireless Access Control Firmware upgrade via HTTP Upload/download configuration file via HTTP Restore to factory default setting
Security	NAT nature firewall, stateful packet inspection (SPI) IP Packet filtering (IP address/Port number) MAC address filtering 64-bit/128-bit WEP encryption, AES

Technical Support

If you need technical support, please check out our IOGEAR Tech Info Library (T.I.L.) at **www.iogear.com/support** for the latest tips, tricks, and troubleshooting. The IOGEAR T.I.L. was designed to provide you with the latest technical information about our products. Most of the answers to your questions can be found here, so please try it out before contacting technical support.

Technical support is available Monday through Friday from 8:00 am to 5:00 pm PST and can be reached at (949) 453-8782 or by email **support@iogear.com**.

Radio & TV Interference Statement

WARNING!!! This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause interference to radio communications. This equipment has been tested and found to comply with the limits for a Class B computing device pursuant to Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference when operated in a commercial environment. Operation of this equipment in a residential area is likely to cause interference, in which case the user at his own expense will be required to take whatever measures may be required to correct the interference.

IN NO EVENT SHALL THE DIRECT VENDOR'S LIABILITY FOR DIRECT, INDIRECT, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM THE USE OF THE PRODUCT, DISK OR ITS DOCUMENTATION EXCEED THE PRICE PAID FOR THE PRODUCT.

The direct vendor makes no warranty or representation, expressed, implied, or statutory with respect to the contents or use of this documentation, and especially disclaims its quality, performance, merchantability, or fitness for any particular purpose.

The direct vendor also reserves the right to revise or update the device or documentation without obligation to notify any individual or entity of such revisions, or updates. For further inquires please contact your direct vendor.

Regulatory Compliance FCC Warning

This device complies with Part 15 of the FCC Rules.
Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.
This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.
This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Changes or modifications not expressly approved by the party responsible for compliance could void your authority to operate the equipment.
1) To comply with FCC RF exposure compliance requirements, a separation distance of at least 20 cm must be maintained between the antenna of this device and all persons.
2) This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

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Contact info.

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